

# BayScapes planting tips

- Plant evergreens and berry-producing shrubs. Their roots prevent erosion, and they provide color, cover, and food for wildlife all year round.
- Choose perennials when possible. They reappear to bloom each year, in ever-greater numbers.
- Newly planted BayScapes require weeding, mulching, and watering in dry periods. Once established, a native plant garden almost maintains itself.
- Create wildlife habitat by stacking tree limbs and twigs in a few areas of the garden. They serve as safe havens for many animals, including turtles.
- Mowing grass is a chore, and it can damage trees. Replace turf grass around trees with native shrubs or groundcover, such as highbush blueberry.
- Hummingbirds love nectar from the flowers of red trumpet creeper vine, and the twining stems of the vine provide shelter for other birds.
- An herb garden is a magnet for butterflies in all stages of life. Plant enough herbs to share with wild residents!
- Check with local nurseries before buying unfamiliar plants. Non-natives may require the use of pesticides or much water.
- Take care to avoid invasive species, which can overtake native plants and reduce food sources. Ask your nursery for a list of invasive species.



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# plant a garden protect the Bay



## BayScapes at Fort Lee, Virginia

# BayScapes and Fort Lee

After every rain, stormwater cascades down roofs, over lawns and parking lots, into gutters and drains, collecting sediment and pollutants as it goes. Normally, plants and trees would prevent some of the runoff from rushing unchecked into our water system.

But overdevelopment reduces nature’s defenses. Without a plant buffer or natural runoff controls, polluted stormwater flows into streams, rivers, and ultimately into the Chesapeake Bay.

### You can help protect the Bay by planting BayScapes at your home or workplace.

Fort Lee has developed this *BayScapes* demonstration garden to show how using native plants and simple low-impact landscaping techniques can make a big difference in protecting the Bay.



BayScapes are gardens of native plants that filter pollutants and conserve water, resist local pests and disease, and help improve the quality of our water resources. BayScapes are beautiful, easy to grow and attract wildlife. Low-impact development techniques help to restore the natural distribution and circulation of water in the landscape. Together, BayScapes and low-impact development allow nature to do its job and improve water quality.

Fort Lee is a full partner in the U.S. Army’s efforts to restore and protect our nation’s largest estuary, the Chesapeake Bay. Bailey Creek originates on the installation and empties into the James River, one of the major tributaries of the Bay. Each of these water systems provides habitat for an extraordinary variety of fish and wildlife. Fort Lee has initiated several projects in cooperation with the U.S. Army Environmental Center, federal and state government agencies and civilians in the community to enhance these

habitats and protect the Chesapeake Bay. Our BayScapes and low-impact development demonstration project is just one example.

### The meadow

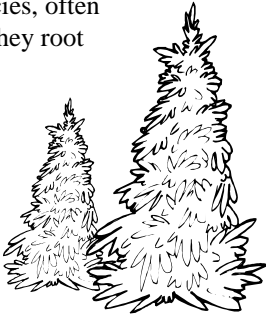
In nature, nothing stays the same for long. Consider what happens after a forest is cleared for development. Seeds blown on the wind settle in bare earth. Soon, they produce a bright green meadow of native grass. Their roots aerate the poor soil, contribute nitrogen to the mix, and capture runoff, preventing erosion.

In our meadow, an expanse of native grasses and bright flowers bobbing randomly in the breeze is an inspiration – not just to two-legged visitors, but to the population of landlife that set up house here. The small birds known as killdeer, for instance, are attracted to the meadow’s pebbly open places, where their camouflaged eggs are nearly invisible. Native meadow grass, like big bluestem, grows profusely, even in poor soil.

### Old field

Once grasses begin to improve the soil, perennials and shrubs solidly take root. Their presence is a signal for butterflies and bees to begin pollinating and spreading the plants. Native shrubs such as gray dogwood are attractive to birds and other wildlife. Evergreen shrubs such as mountain laurel offer shelter and beauty. These new plants help to sculpt the soil, creating low places where water collects and seeps slowly into the ground.

As shrubs of the field grow, their shade discourages grasses and other perennials... but not fast-growing trees. Pines are pioneer species, often the first to occupy a field. They root deeply, improving the soil even more.



Pine forest

The forest is a maturing community full of creatures, seen and unseen. The soil of our forest has been deeply aerated by roots of Virginia pine and other long-leaf pines, reaching for underground water. Moisture percolates slowly under the tree canopy. Nutrients from decaying forest litter make the soil rich. At this stage, hardwood trees that take root prosper from the high quality soil and moisture conditions. Soon, a deciduous forest of larger trees will begin to out-compete the pines for space.

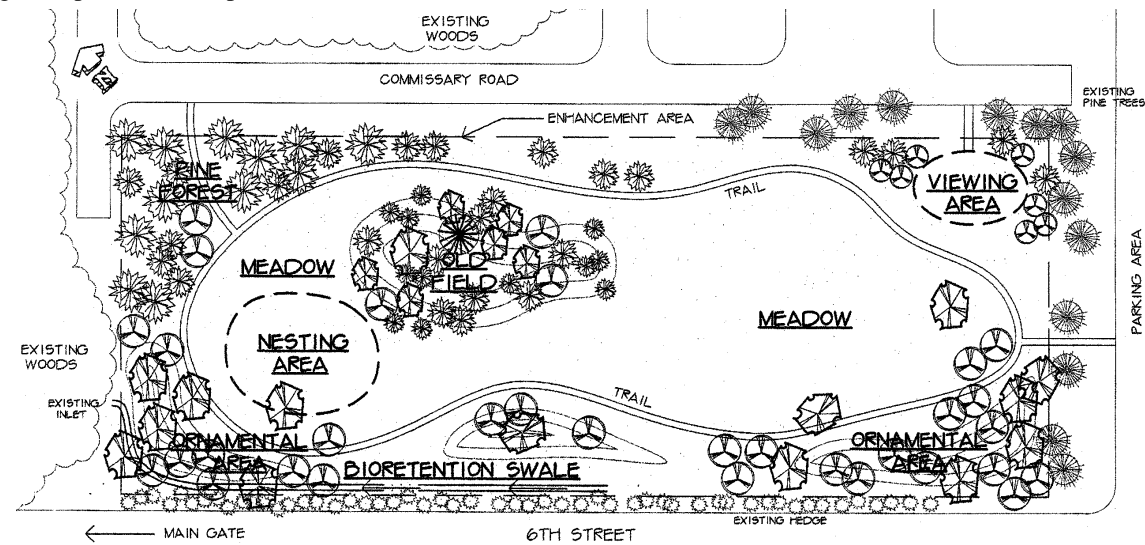
At every stage of this **natural succession** process, each plant community prepares the soil for the next community to arrive and thrive. Where stormwater once rushed into storm drains, plants and trees now arrest its flow, filtering pollutants and encouraging wild creatures to move in. Nature makes room for constant, healthy change. It’s only when we try to stop the process – mowing grass to retain its meadow-like openness, for instance – that we prevent new plant communities from developing.

Bioretention swale

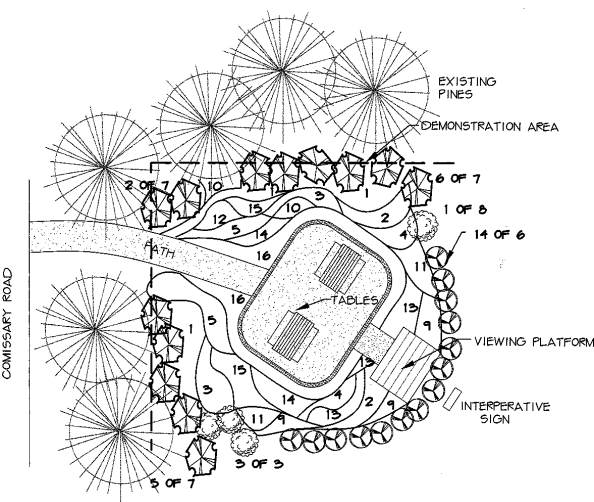
A bioretention swale is a low place where plants and layered soil allow stormwater to collect and seep slowly into the ground. Swales mimic the process nature uses to store and filter rainwater through the soil. This “rain garden” helps the Chesapeake Bay in many ways. Plants rooted in the swale filter excess nutrients, chemicals, and other pollutants from the water before they reach streams and rivers.

Development disrupts the hydrology of the landscape. Instead of seeping into the soil, stormwater runs off impervious surfaces of roof tops, parking lots and sidewalks to large stormwater management ponds where water cascades into drains. The result is increased runoff, elevated water temperatures, more pollutants and decreased groundwater recharge. Low-impact development techniques restore rain gardens throughout the landscape, where stormwater doesn’t have a chance to rush far before it is captured, filtered, and restored to the earth.

You can create your own rain garden where water drains or pools. Remove turf grass and fill the low spot with layers of sand, soil and mulch. Then add plants that can get their “feet” wet, but don’t mind a dry spell, such as garden phlox or swamp milkweed.



Viewing area



From the viewing area of our demonstration garden, you can see three stages of natural succession: the meadow, old field, and pine forest. The fourth and final stage is a woodland forest. It hasn’t yet taken root here.

But Fort Lee has provided the right conditions for hardwoods to grow near the pine forest. Volunteers and Fort Lee staff will weed, mulch, and water each landscape until the plants are well established. Then we’ll let nature to do the rest.

Enjoy watching the growth and change of the natural landscape. Come back often to take a stroll, watch for small mammals near the shrubs, listen for the killdeer calling.

Meanwhile, why not plant your own BayScapes and rain gardens at your home or workplace? Whether you sow a garden container of butterfly-loving herbs or an entire acre of native shrubs and grasses, your effort has countless benefits for the Chesapeake Bay and all life in the watershed.

Viewing Area Plant List	
KEY	COMMON NAME
1	black snakeroot
2	mistflower
3	white snakeroot
4	wild geranium
5	alum root
6	shrubby St. Johnswort
7	mountain laurel
8	spicebush
9	bee balm
10	royal fern
11	garden phlox
12	Christmas fern
13	orange coneflower
14	blue-eyed grass
15	false solomon’s seal
16	Allegheny foamflower

For more information about using BayScapes and low-impact development techniques at your home or workplace, contact:

- Fort Lee, Environmental Management Office  
<http://www.lee.army.mil>
- Low Impact Development Center, Inc.  
<http://lowimpactdevelopment.org>
- U.S. Army Environmental Center  
<http://aec.army.mil>
- U.S. Fish & Wildlife Service  
<http://www.fws.gov>
- Chesapeake Bay Program  
<http://www.chesapeakebay.net>